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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/064,216	06/21/2002	Ching-Fang Yen	MXIP0013USA	2837

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NAIPO (NORTH AMERICA INTERNATIONAL PATENT OFFICE)
P.O. BOX 506
MERRIFIELD, VA 22116

EXAMINER

HO, HOAI V

ART UNIT	PAPER NUMBER
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2818

DATE MAILED: 10/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/064,216	YEN, CHING-FANG	
	Examiner	Art Unit	
	Hoai V. Ho	2818	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 and 26-32 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 26-32 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 June 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____. | 6) <input type="checkbox"/> Other: _____ |

1. This office acknowledges receipt of the following items from the Applicant:
Papers submitted under 35 U.S.C. 119(a)-(d) have been placed of record in the file.
2. Claims 1-14 and 26-32 are presented for examination.
Claims 15-25 have been canceled.

Election/Restriction

3. Applicant's election of claims 1-14 and 26-32 filed on August 12, 2003 is acknowledged.

Drawings

4. Figures 1 to 2B should be designated by a legend such as --Prior Art-- as indicated in paragraphs [0017] to [0019], because only that which is old is illustrated. See MPEP § 608.02(g).

Correction is required.

5. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

Title

6. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

8. Claims 1-3, 5, 7-10, 12, 14 and 26-32 are rejected under 35 U.S.C. 102(a) as being anticipated by Applicant Admitted Prior Art (AAPA).

As per claims 1, 7, 8, 14, 26, 29, 31 and 32, Figures 1, 2A and 2B of AAPA are directed to a non-volatile memory positioned on a substrate (42) of a semiconductor wafer, the non-volatile memory comprising: main memory array region (60) comprising: at least one main memory cell, the main memory cell comprising a main source (56) and a main drain (54) positioned in the substrate of the semiconductor wafer; at least one main bit line (BL1), the main bit line being electrically connected to the main drain of the main memory cell; and at least one main ground line (GL1), the main ground line being electrically connected to the main source of the main memory cell; a redundant memory array region (80) connected to the main memory array region, the redundant memory array region comprising: at least one redundant memory cell, the redundant memory cell comprising a redundant source (56) and a redundant drain (54) positioned in the substrate of the semiconductor wafer; at least one redundant bit line (RBL1), the redundant bit line being electrically connected to the redundant drain of the redundant memory cell; and at least one redundant ground line (RGL1), the redundant ground line being electrically connected to the redundant source of the redundant memory cell; and a common source (70) used as the main source and the redundant source formed between the main memory array region and the redundant memory array region.

As per claims 2, 3, 5, 9, 10, 12, 27, 28 and 30, Figure 1 of AAPA discloses further comprising a peripheral circuit region (10) having: a main memory ground line decoder (26)

connected to the main ground lines in the main memory array region; a redundant memory ground line decoder (28) electrically connected to the redundant ground lines in the redundant memory array region; and at least two signal pass lines (fig. 1), two ends of each of the signal pass lines being electrically connected to the main memory ground line decoder and the redundant memory ground line decoder, respectively.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 4, 6, 11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art (AAPA).

AAPA discloses all the subject matter claimed except for wherein a sub-decoder of the main memory ground line decoder is electrically connected to the common ground line and comprises a number of logic NAND and Inverter circuits. However, a paragraph [0005] of AAPA discloses that the main memory ground line decoder 26 electrically connected to a plurality of ground lines GL in the main memory array region. Therefore, it would have been obvious to a person of ordinary skill in the art at the time invention was made to recognize that AAPA could have the sub-decoder of the main memory ground line decoder as the claimed invention in order to connect to the common ground line.

11. The prior art made of record and not relied upon is considered pertinent to applicants' disclosure. Hirano (6134142) and Sato (5450360) disclose a redundancy method for a nonvolatile memory device.
12. When responding to the office action, Applicants are advised to provide the examiner with the line numbers and page numbers in the application and/or references cited to assist the examiner to locate the appropriate paragraphs.
13. A shortened statutory period for response to this action is set to expire 3 (three) months and 0 (zero) day from the date of this letter. Failure to respond within the period for response will cause the application to become abandoned (see MPEP 710.02 (b)).
14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to whose telephone number is (703) 308-4839. Other inquiries of this application should be called to (703) 308-0956 or the fax number (703) 872-9306.



H. Ho
September 15, 2003



Hoai V. Ho
Primary Examiner
Art Unit 2818